

Title (en)  
SUPER HARD ALLOY AND CUTTING TOOL USING SAME

Title (de)  
SUPERHARTE LEGIERUNG UND SCHNEIDWERKZEUG DAMIT

Title (fr)  
ALLIAGE SUPER-DUR ET OUTIL DE COUPE UTILISANT CE DERNIER

Publication  
**EP 2474634 A4 20161123 (EN)**

Application  
**EP 10809899 A 20100811**

Priority

- JP 2009191493 A 20090820
- JP 2010063630 W 20100811

Abstract (en)  
[origin: US2012144753A1] There are provided a cemented carbide high in thermal diffusivity and excellent in wear resistance, and a cutting tool including a base material formed of this cemented carbide. The cemented carbide is a WC based cemented carbide in which a hard phase mainly constituted of WC grains is bound by a binder phase mainly constituted of Co, and is used for a cutting tool. The binder phase is substantially constituted of Co, or Co and Ni. A total content of Co and Ni is not less than 4.5 mass % and not more than 15 mass %. In this cemented carbide, the WC grains have an average diameter of not less than 0.4  $\mu\text{m}$  and not more than 4  $\mu\text{m}$ .

IPC 8 full level  
**C22C 29/08** (2006.01); **B23B 27/14** (2006.01); **C04B 35/56** (2006.01); **C22C 1/05** (2006.01); **C22C 14/00** (2006.01)

CPC (source: EP KR US)  
**B23B 27/14** (2013.01 - KR); **C22C 1/05** (2013.01 - KR); **C22C 14/00** (2013.01 - EP US); **C22C 29/08** (2013.01 - EP KR US)

Citation (search report)

- [X] US 6655882 B2 20031202 - HEINRICH HANS-WILM [DE], et al
- [X] JP 2002205207 A 20020723 - SUMITOMO ELECTRIC INDUSTRIES
- [X] US 2009044415 A1 20090219 - FUJINO ASAKO [JP], et al
- See references of WO 2011021554A1

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EP3686302A4

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**US 2012144753 A1 20120614; US 8801816 B2 20140812**; CN 102482739 A 20120530; CN 105154744 A 20151216;  
CN 105154744 B 20200811; EP 2474634 A1 20120711; EP 2474634 A4 20161123; EP 2474634 B1 20190320; JP 2011042830 A 20110303;  
JP 5462549 B2 20140402; KR 101581081 B1 20151229; KR 20120041265 A 20120430; TW 201122117 A 20110701; TW I470088 B 20150121;  
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**US 201013390841 A 20100811**; CN 201080036720 A 20100811; CN 201510542673 A 20100811; EP 10809899 A 20100811;  
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